

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

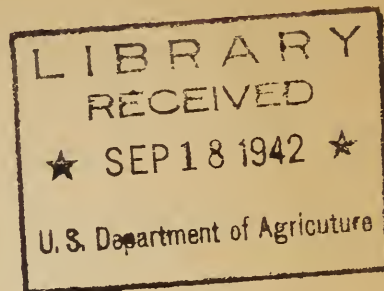
1.942
W32R29
Reserve
Conf. files

~~Confidential~~

Not for general distribution

July 1942

UNITED STATES DEPARTMENT OF AGRICULTURE
U.S. Agricultural Marketing Administration
Washington, D. C.



REPORT ON INTERLABORATORY
STUDY OF CARDED WOOL, WOOL TOP, AND NOIL

The relationship of fineness in carded wool, wool top, and noil was studied by the Agricultural Marketing Administration in cooperation with nine industrial laboratories.

The study was made on five lots, one each of grades 64's, 60's, 58's, 56's, and 50's, which were assembled by a committee of the trade and industry. Samples of each lot were submitted to the cooperating laboratories by the Agricultural Marketing Administration. In making the tests, which in the aggregate comprised more than 90,000 measurements, the laboratories followed the usual procedures and schedules for measuring diameter of fiber of wool top. These methods of test have been published by the Department of Agriculture and the American Society for Testing Materials. In the table below are given the grand averages for the diameter of fiber of the different lots in comparison with the average fiber diameter values of the grades of the official wool top standards.

Grade	Requirements of Wool Top Standards	T E S T L O T S		
		Wool Top	Card Sliver	Noil
	<u>Microns</u>	<u>M i c r o n s</u>		
64's	21.1 to 22.5	21.3	20.8	19.6
60's	24.1 to 25.5	24.0	23.5	21.4
58's	25.6 to 27.0	26.0	25.1	22.8
56's	27.1 to 29.0	27.5	26.9	24.3
50's	29.1 to 31.5	30.4	29.4	26.0

The data obtained in the tests are given in detail in the attached schedules.

Diameter and distribution of fibers of
carded wool, wool top, and noil as determined by 10 laboratories

Lab.	\bar{X}	σ	V	Percentage of fibers by micron groups						Observations
				10-20	10-30	30-40	30-50	40-50	Over schedule	
	21.1 22.5			36	94	6			0.333	600
					64's Standard Top					
					64's Top No. 64421					
1	21.16	4.47	21.1	43.0	96.3	3.7			0.0	600
2	21.73	4.51	20.8	38.5	96.5	3.5			0.0	800
3	20.7	4.21	20.4	48.00	97.25	2.75			0.0	400
4	21.28			41.75	97.00	2.75			0.25	
5	21.51			40	96	4			0.0	600
6	21.50			38	96	4			0.0	600
7	20.95			48	97	3			0.0	600
8	21.25			41.66	96.17	3.83			0.0	600
9	21.2	4.5	21.2	47.6	97.5	2.3			0.2	600
10	21.52			41.0	95.7	3.6			0.7	300
					64's Card Sliver No. 64421					
1	20.73	4.63	21.8	49.2	97.7	2.3			0.0	600
2	21.26	4.45	20.9	45	96	4			0.0	800
3	20.6	4.12	20.0	50.50	97.50	2.50			0.0	400
4	21.02			44.00	97.00	2.50			0.5	
5	20.86			47	97	3			0.0	600
6	21.00			45	97	3			0.0	600
7	20.67			49	97	3			0.0	600
8	20.89			46.17	96.50	3.50			0.0	600
9	20.5	3.9	18.2	54.5	99.5	0.5			0.0	600
10	20.74			47.3	97.6	2.3			0.0	300
					64's Noils No. 64421					
1	19.20	4.60	23.9	62.3	98.0	1.8			0.2	600
2	20.09	4.27	21.3	52.5	97.5	2.5			0.9	800
3	19.7	3.59	18.2	56.75	99.75	0.25			0.0	400
4	19.88			66.25	98.25	1.75			0.0	
5	19.59			59	98.8	1.2			0.0	600
6	20.20			52	98.0	2.0			0.0	600
7	19.64			59	98	2			0.0	600
8	19.03			62.25	98.75	1			0.25	400
9	19.6	4.1	20.9	62.0	99.2	0.8			0.0	600
10	19.49			57.4	96.7	1.6			0.0	300

JAN 15 1964

Diameter and distribution of fibers of
carded wool, wool top, and noil as determined by 10 laboratories

Lab.	X	σ	V	Percentage of fibers by micron groups						Observations
				10-20	10-30	30-40	30-50	40-50	Over schedule	
					60's Standard Top					
	24.1 25.5			18	83	17		0.5	800	
					60's Top No. 60421					
1	24.13	6.08	25.2	29.0	84.0	14.9		1.1	800	
2	24.11	5.76	23.9	24.5	87	11.5		1.5	1200	
3	24.1	5.96	24.8	27.0	84.13	14.75		1.12	800	
4										
5	24.56			20.5	82.2	16.5		1.3	600	
6										
7	23.79			29	87	12		1	600	
8	24.32			27.38	83.87	14.63		1.5	800	
9	23.6	5.9	25.0	34.3	87.3	12.0		0.7	800	
10	23.84			26.0	87.7	10.6		1.7	300	
					60's Card Sliver No. 60421					
1	23.35	5.80	24.8	30.9	86.8	12.6		0.6	800	
2	24.43	5.81	23.8	23.5	85.5	13		1.5	1200	
3	22.4	5.17	23.2	34.75	90.25	9.75		0.0	400	
4										
5	23.39			27.1	87.8	11.9		0.3	1100	
6										
7	23.39			28	87	12		0.5	600	
8	23.77			30.75	84.50	13.75		1.75	800	
9	23.7	5.3	22.8	28.4	89.4	10.6		0.0	800	
10	23.30			29.7	88.3	11.7		0.0	300	
					60's Noils No. 60421					
1	21.55	5.28	24.5	42.5	93.1	6.3		0.1	800	
2	21.98	5.17	23.5	39	93.5	6.5		0.0	1200	
3	21.6	5.28	24.4	43.25	94.00	5.50		0.5	400	
4										
5	21.14			45	95	5		0.0	800	
6										
7	21.71			43	92	8		0.0	600	
8	21.24			47.7	92.2	7.3		0.5	600	
9	20.4	5.2	25.6	56.8	95.9	4.0		0.1	800	
10	21.38			43.7	92.3	7.7		0.0	300	

Diameter and distribution of fibers
of carded wool, wool top, and noil as determined by 10 laboratories

Lab.	\bar{X}	σ	V	Percentage of fibers by micron groups						Observations
				10-20	10-30	30-40	30-50	40-50	Over schedule	
				58's Standard Top						
	25.6 27.0			16	74		26	2	0.75	1200
				58's Top No. 58421						
1	26.83	7.17	26.7	16.8	68.3		31.3	3.8	0.4	800
2	26.50	6.75	25.5	17	73.5		22.5	4		1200
3	25.6	6.57	25.6	21.50	77.75		22.13	2.63	0.12	800
4										
5	26.56			15.1	72.1		27.9	3.6		800
6										
7	25.52			21	75		25	2	0.0	600
8	25.86			20.5	74.38		25.5	3.12	0.12	800
9	25.1	6.0	23.7	24.9	78.6		21.4	1.0	0.0	800
10	25.90			20.9	78.3		21.6	4.9	0.0	700
				58's Card Sliver No. 58421						
1	25.63	6.70	26.1	18.3	77.3		22.2	2.1	0.5	800
2	25.62	6.71	26.2	20.5	78		19	3.0	0.0	1200
3	25.1	6.84	27.2	23.00	81.25		15.50		3.25	400
4										
5	25.68			17	78.25		21.75	2.3	0.0	800
6										
7	24.76			23	81		17	2.	0.0	600
8	25.47			21.25	78.12		21.88	2.5	0.0	800
9	24.5	6.7	27.2	25.8	80.1		19.9	1.0	0.0	800
10	24.29			26.3	82.0		18.0	1.3	0.0	400
				58's Noils No. 58421						
1	22.50	6.50	28.9	40.3	85.8		14.2	1.2	0.0	800
2	23.05	5.73	24.9	32	89.5		9	1.5	0.0	1200
3	23.1	6.14	26.6	33.00	89.25		8.50	2.25	0.0	400
4										
5	22.45			40	87.6		12.4	1.3	0.0	800
6										
7	23.15			35	86		12	2	0.0	600
8	23.35			34.25	83.87		16.13	2.13	0.0	800
9	23.1	6.7	29.1	40.5	87.5		12.5	1.0	0.0	800
10	21.52			44.0	93.0		7.0	0.7	0.0	400

Diameter and distribution of fibers of
carded wool, wool top, and noil as determined by 10 laboratories

Lab.	\bar{X}	σ	V	Percentage of fibers by micron groups						Observations
				10-20	10-30	30-40	30-50	40-50	Over schedule	
				56's Standard Top						
	27.1 29.0			9	64		36	5	1.	1200
				56's Top No. 56421						
1	27.25	6.76	24.8	13.6	68.7		31.1	3.7	0.2	1200
2	28.32	7.41	26.2	11.5	64.5		29	6.5	0.0	1200
3	27.31	7.02	25.7	15.25	69.75		29.88	4.50	0.37	800
4										
5	27.56			12.5	67		34.5	4.5	0.0	800
6										
7	27.03			14	68		32	3	0.33	600
8	27.66			13.75	64.83		34.67	4.25	0.5	1200
9	27.2	6.7	24.4	15.4	68.5		31.5	3.0	0.0	
10	27.27			14.1	70.4		29.2	6.7	0.2	1200
				56's Card Sliver No. 56421						
1	26.58	6.84	25.7	16.6	70.0		29.8	3.1	0.2	1200
2	27.21	6.20	22.9	13.5	71		24	5	0.0	1200
3	27.26	6.71	24.5	13.50	68.38		30.37	3.75	0.25	800
4										
5	27.03			14	69		31	3.3	0.0	1200
6										
7	26.78			15	72		28	4.	0.67	600
8	27.46			15.0	68.08		31.09	4.42	0.83	1200
9	26.4	6.3	23.9	17.8	77.0		23.0	1.9	0.8	
10	26.71			17.0	74.0		26.6	5.0	0.0	1200
				56's Noils No. 56421						
1	23.83	5.93	24.9	28.8	85.4		14.6	1.4	0.0	800
2	25.18	6.45	25.7	20.5	80		17	3	0.0	1200
3	24.1	6.63	27.5	28.63	84.38		12.75	0.0	2.87	800
4										
5	24.08			28	83.4		16.6	2.5	0.0	1200
6										
7	24.53			24	79		21	2	0.33	600
8	24.53			25.88	81.25		18.63	2.5	0.12	800
9	24.3	5.6	22.6	27.4	89.0		11.5	0.5	0.0	
10	23.63			30.1	86.3		13.4	1.4	0.0	1200

Diameter and distribution of fibers
of carded wool, wool top, and noil as determined by 10 laboratories

Lab.	\bar{X}	σ	V	Percentage of fibers by micron groups						Observations
				10-20	10-30	30-40	30-50	40-50	Over schedule	
					50's Standard Top					
	29.1 31.5			4	45		55	10	1.25	1200
					50's Top No. 50421					
1	30.45	7.90	25.9	8.1	50.9		48.1	11.3	1.0	1200
2	31.09	8.23	26.5	7	50		36.5	11.5	2	1200
3	29.7	7.75	26.1	9.25	52.75		46.50	8.50	0.75	400
4										
5	30.28			6.0	52.5		47	8	0.01	800
6										
7	29.37			9	58		40.5	8.5	1.5	800
8	30.75			6.83	49.08		49.67	10.5	1.25	1200
9	30.8	7.5	24.4	9.2	46.2		55.5	9.2	0.3	
10	30.39			10.5	54.6		43.5	11.3	1.78	900
					50's Card Sliver No. 50421					
1	29.68	7.58	25.5	9.8	53.3		46.3	9.4	0.4	1200
2	29.85	7.74	25.9	8.5	57.5		32.5	9	1.0	1200
3	29.6	7.50	25.3	8.0	60.0		39.0	9.5	1.0	400
4										
5	29.33			9	56.7		43	9	0.3	1200
6										
7	29.51			7	55		45	10	0.0	400
8	29.40			9.25	56.58		42.75	9.17	0.67	1200
9	28.9	6.9	23.8	10.6	57.7		42.3	4.7	0.0	
10	28.58			12.5	61.7		38.2	9.0	0.83	600
					50's Noils No. 50421					
1	26.13	7.17	27.4	19.5	73.1		26.4	3.0	0.5	800
2	26.25	7.26	27.6	19.5	75		19.5	5.5	0.0	1200
3	26.6	7.10	18.9	20.25	71.00		28.50	3.50	0.50	400
4										
5	25.73			21	75.9		23.6	3.2	0.5	1200
6										
7	25.69			18	77		22	2	1	400
8	26.52			18.66	71.75		26.67	4.75	0.58	1200
9	25.4	6.6	26.0	23.2	78.8		21.0	1.7	0.2	
10	25.27			24.0	78.8		20.2	3.8	1.0	600

